

Options

Where Do We Put the Salt



Strategy Plan

- Current process organization roadmaps
- Plan development stages/scale
- Existing study results and information
- Early action opportunities
- Priorities and success criteria by stage
- Policy issues and alternatives
- Technical issues, strategies and alternatives
 - Future studies areas
 - Future management options
 - Project and program strategies and alternatives
- Stakeholder and outreach/communication plan
- Potential funding opportunities

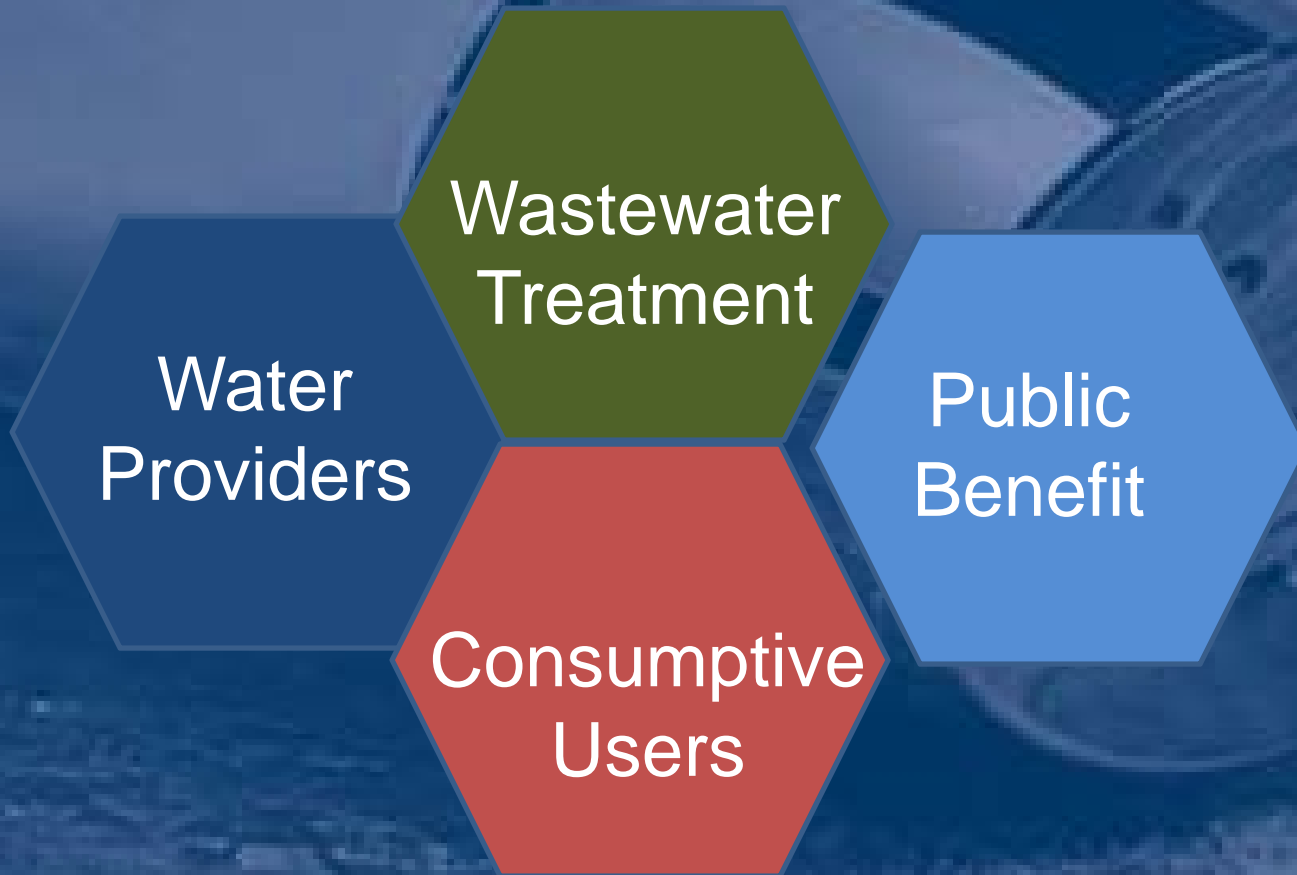


Salt Accumulation in Central Valley

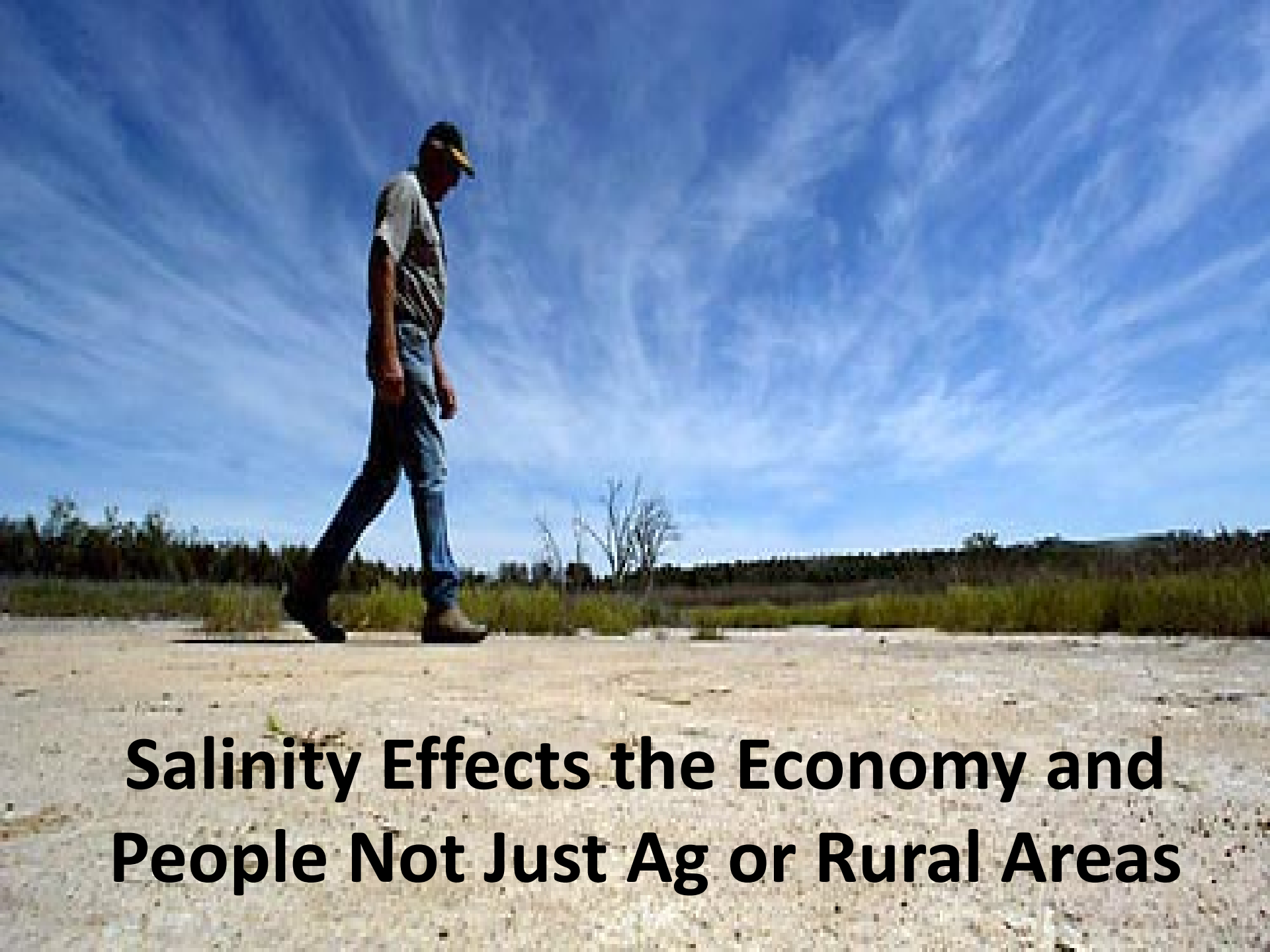
- Recent analysis indicate greater than 15.5 million tons per year of salt are brought into or mobilized in the Central Valley
- By 2030 this will increase by over 1 million tons per year
- Impacts will result in over \$1M per years in 2030



Water/Salinity Players



All must be engaged in the solutions



**Salinity Effects the Economy and
People Not Just Ag or Rural Areas**

Which person is not a candidate for president?

① Hillary Clinton

0%

② Barack Obama

2%

③ Arnold Schwarzenegger

98%

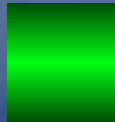
④ John Mc Cain

0%



Who do you think will be the next president?

① Hillary Clinton



5%

② Barack Obama



27%

③ John McCain



61%

④ Mickey Mouse



7%



What is your age?

① Under 30



② 31 to 44



③ 45 to 54



④ 55 to 70



⑤ Over 70

0%



Where do you work?

① Government Local



② Government State or Federal



③ Agriculture



④ Other Business



⑤ Other



What is your role?

① Waste Water Manager



② Water Manager



③ Industrial Water/Wastewater



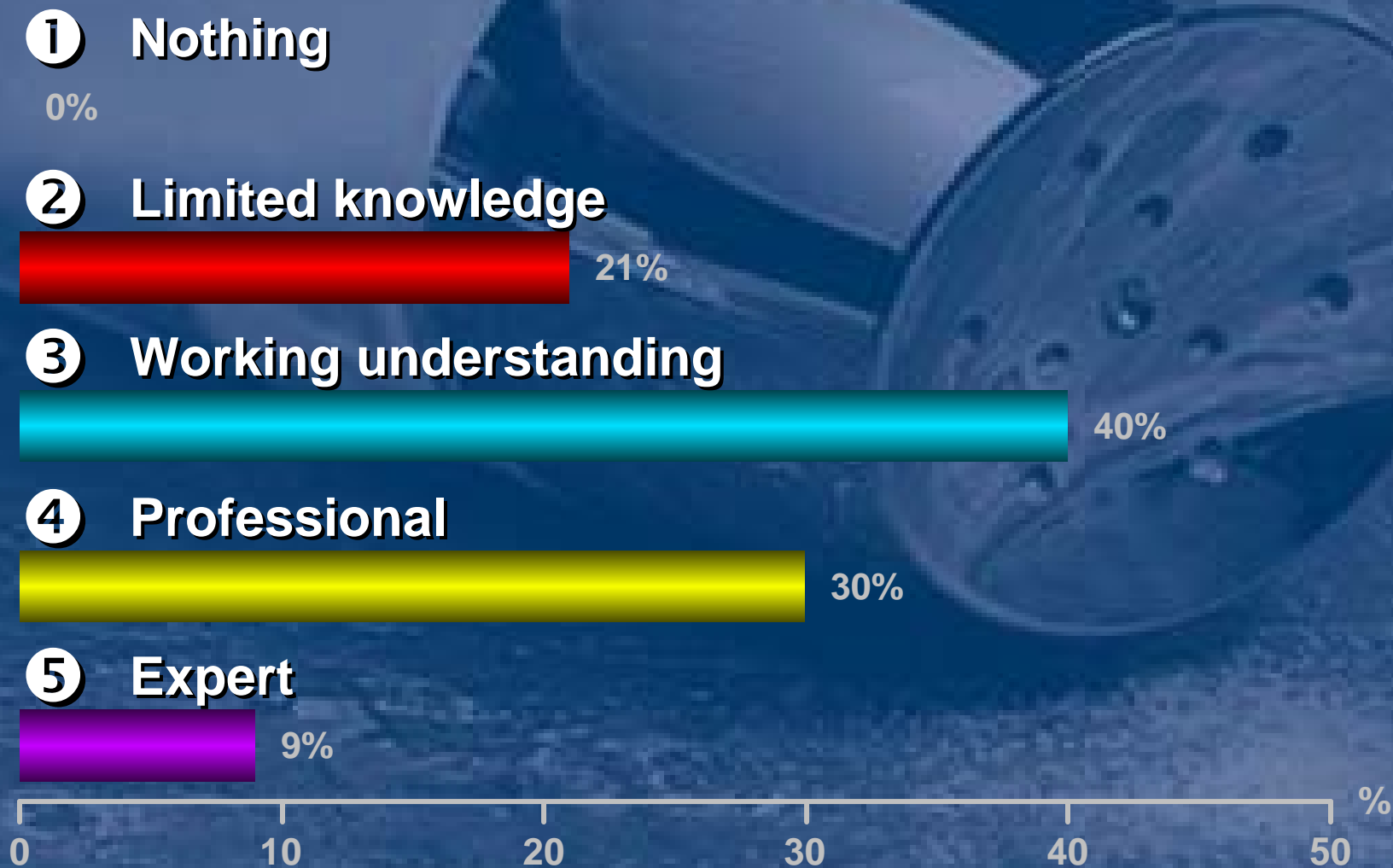
④ City/County Management



⑤ Other



What did you know about salinity before today?





Which salt management options do you know the most about?

① Brine lines



② Reverse osmosis



③ On farm management



④ Deep well injection

0%

⑤ Evaporation/precipitation



Options

- Stack it up in piles?
- Give it to your relatives who visit to take home?
- How about some that are more likely?

Brine lines are not used for?

❶ Export of salt from the basin



2%

❷ Industrial brine management

0%

❸ Regional programs



9%

❹ Improving drinking water quality



20%

❺ Disposal of untreated Ag drainage



69%

%



Reverse osmosis separates salt from water but it's NOT

① Uses electricity

0%

② Requires further brine management

18%

③ Is exotic technology

64%

④ Depends on the water source

8%

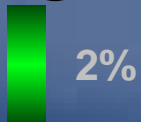
⑤ May be costly

10%



Which is NOT true about on farm water management and reuse?

① Reuses water more than once



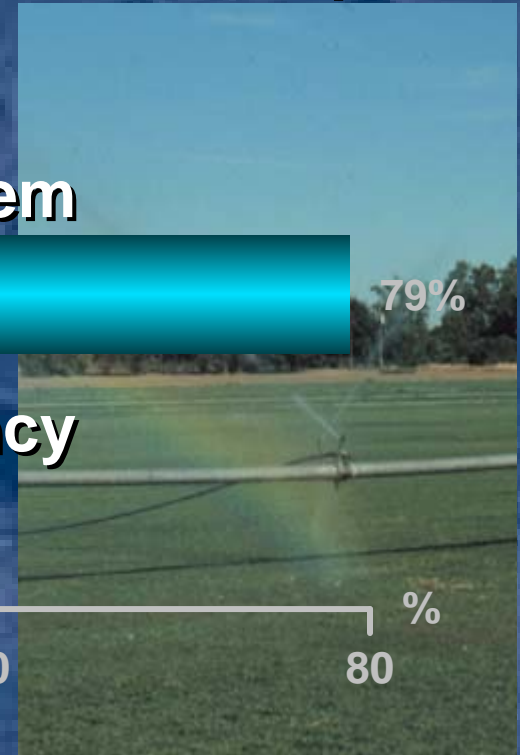
② Moves from higher value to lower value crops



③ Eliminates the salt from the system



④ Can provide added water efficiency



Salt storage and regional distributed management

1 Might be able to be implemented more quickly than ba

0%

2 Could allow regional economic development

0%

3 May facilitate material reuse and marketing

5%

4 Requires leaders in each area or region

0%

5 All of the above

95%



Drainage has been studied in the valley for many years this solution was

① Related to agricultural irrigation

0%

② Complicated by other non-salt constituents

0%

③ Not completed leaving much salt in the valley

0%

④ Complicated by political issues

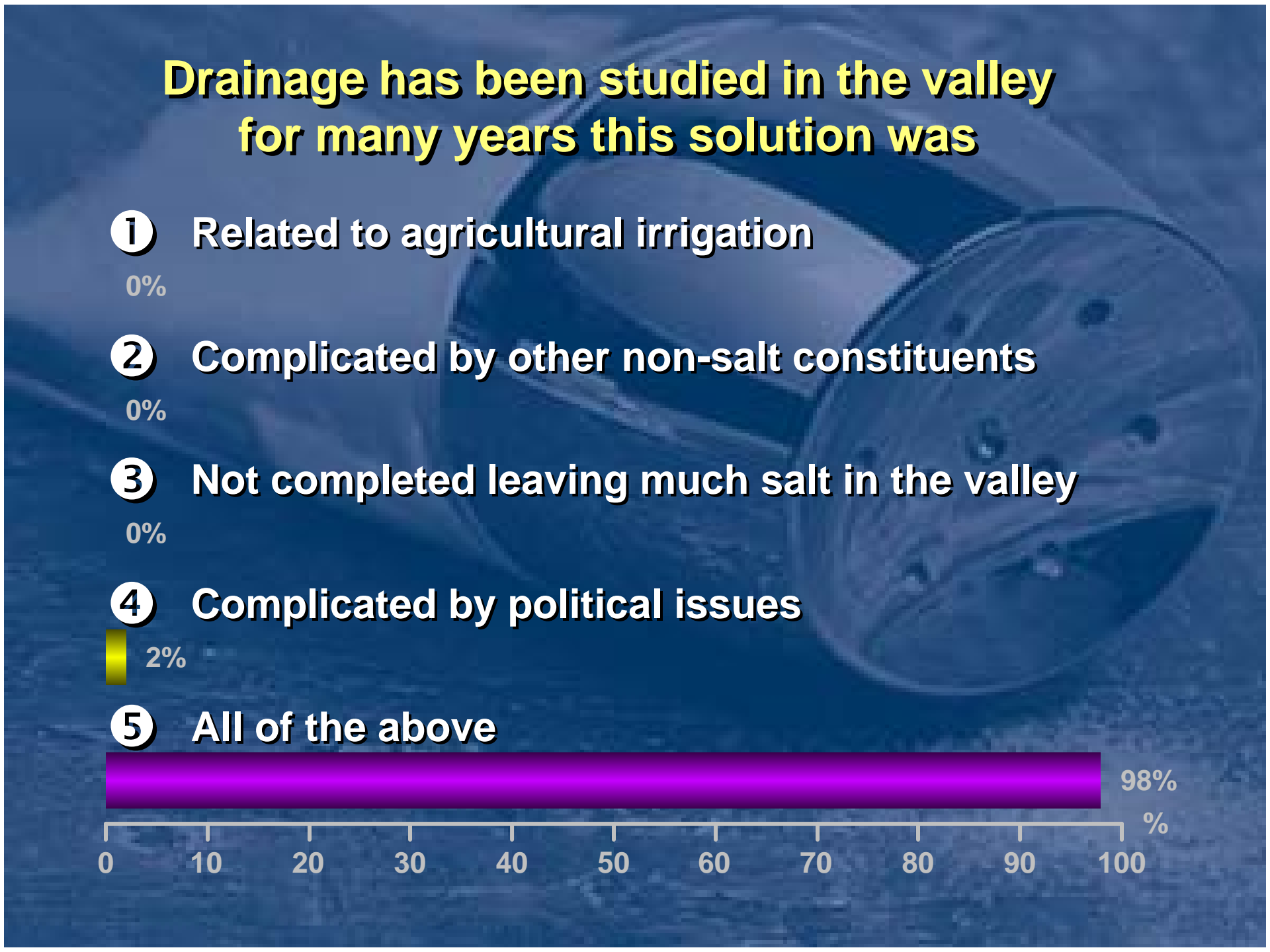
2%

⑤ All of the above

98%

%

0 10 20 30 40 50 60 70 80 90 100



Deep well injection places concentrated brine below the active aquifer and is commonly used for?

① Wastewater

0%

② Metal plating wastes

0%

③ Oil field brine

95%

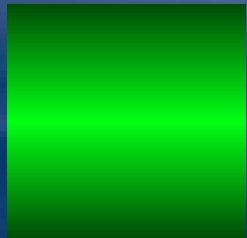
④ Toxic waste

5%



Growth will make salt management

1 Easier



14%

2 Harder

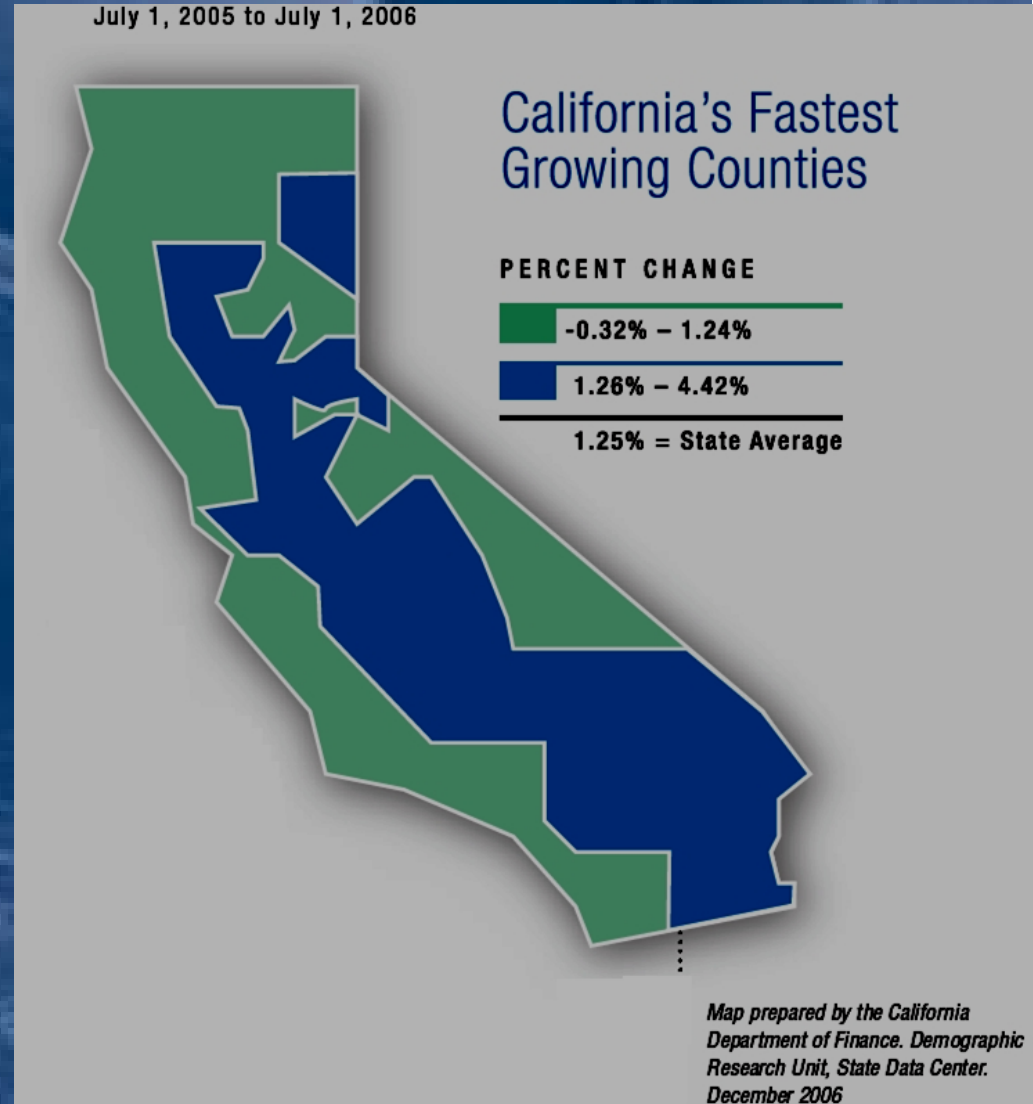


86%

0 10 20 30 40 50 60 70 80 90 %

Growth as an Answer

- If we are committed and prepared can the same growth that increased salts provide the solutions?
- If growth does not pay will current residents and Businesses be able to fund the costs?



Market or Non-regulatory Salinity Controls

① Uses the power of economic incentive



② Allows creativity and unique solutions



③ Encourages removal of salt at the most efficient location



④ Requires regulatory oversight



Market Solutions

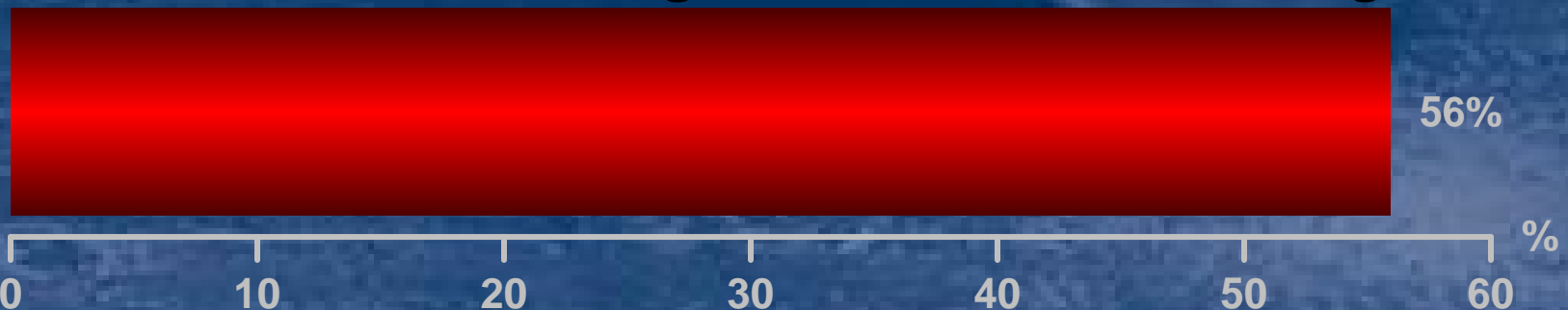


Banking or credits could be a method for financing salt management efforts if the system

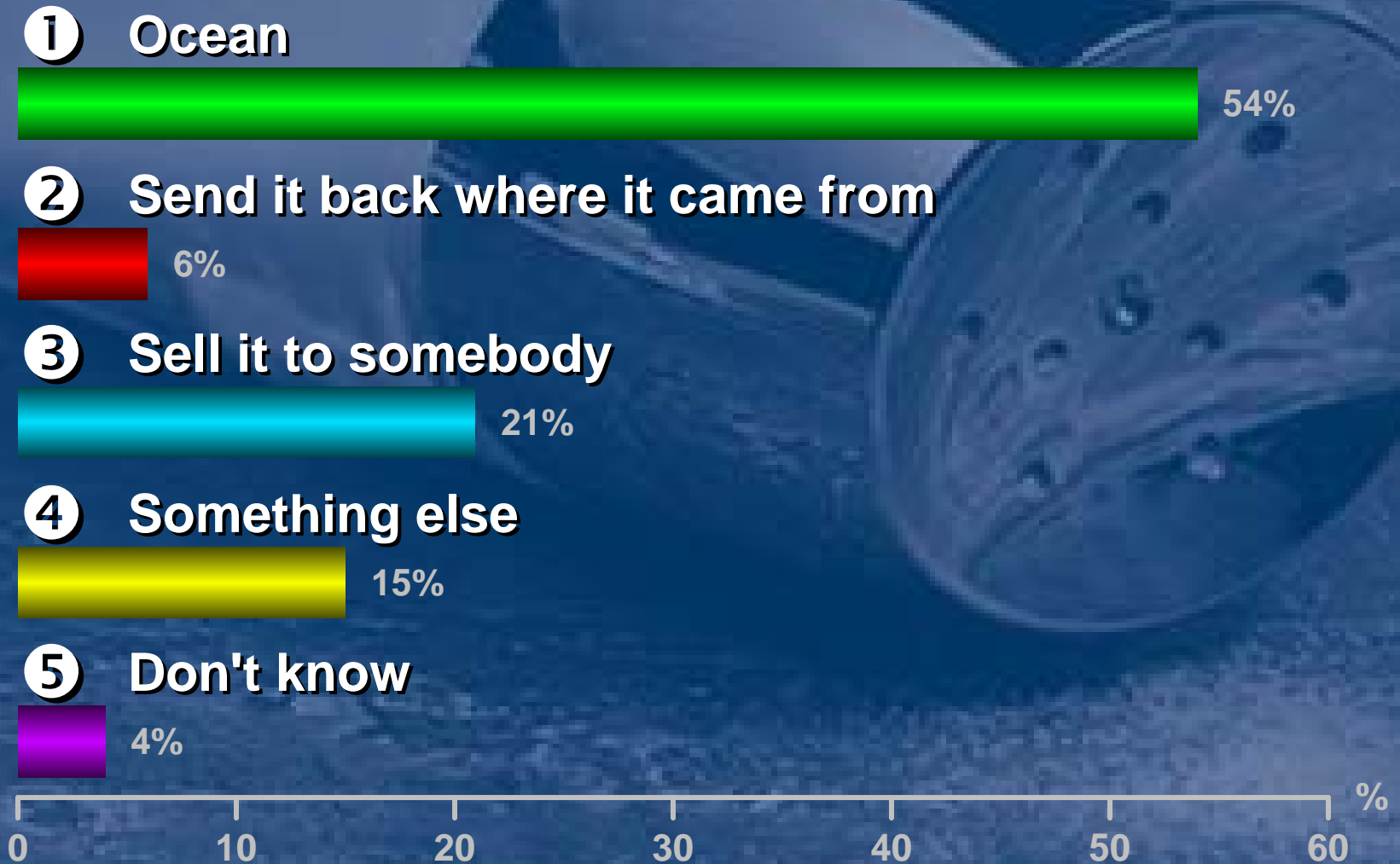
① Could be designed and implemented



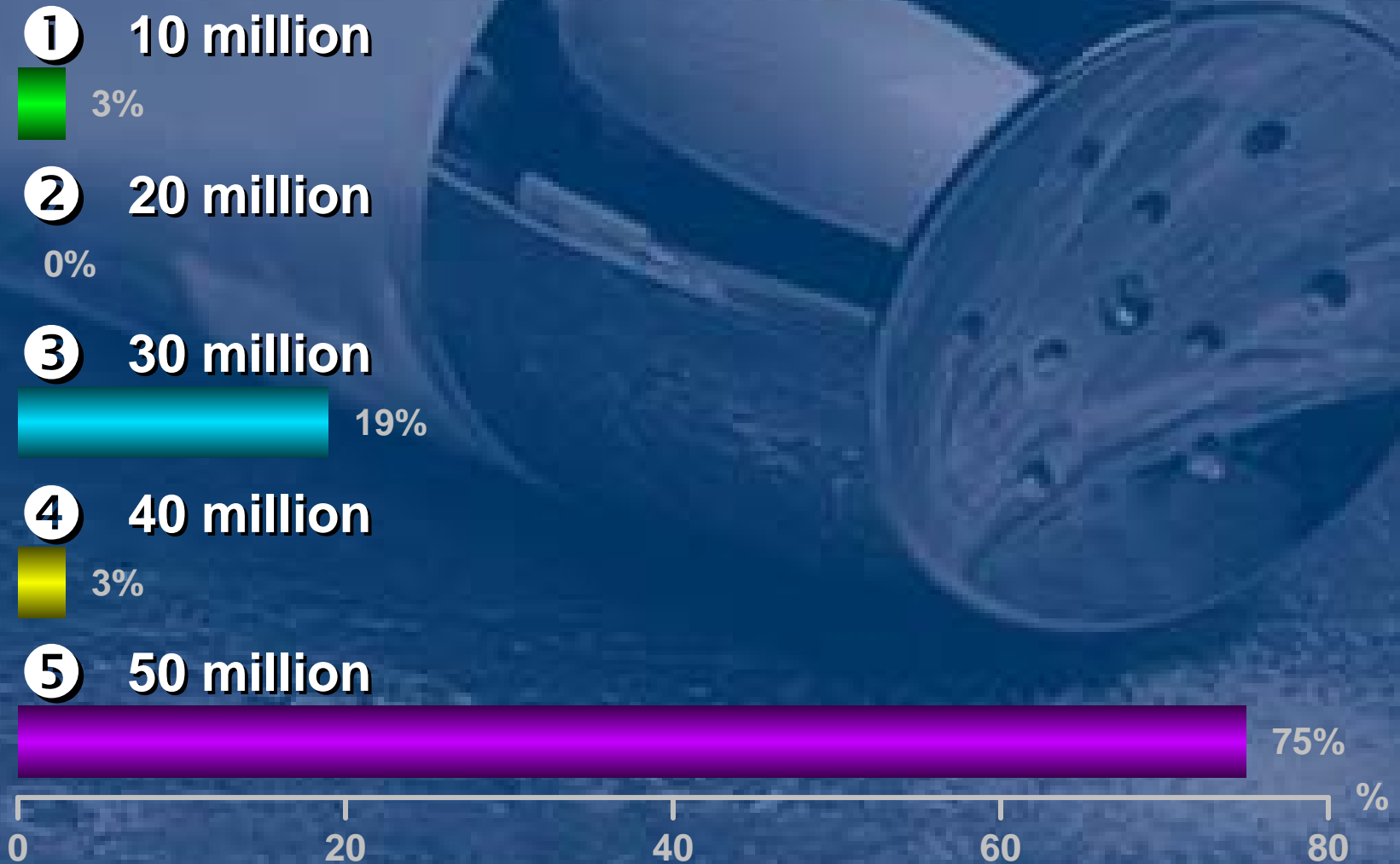
② Results in balancing salt in and out of the region



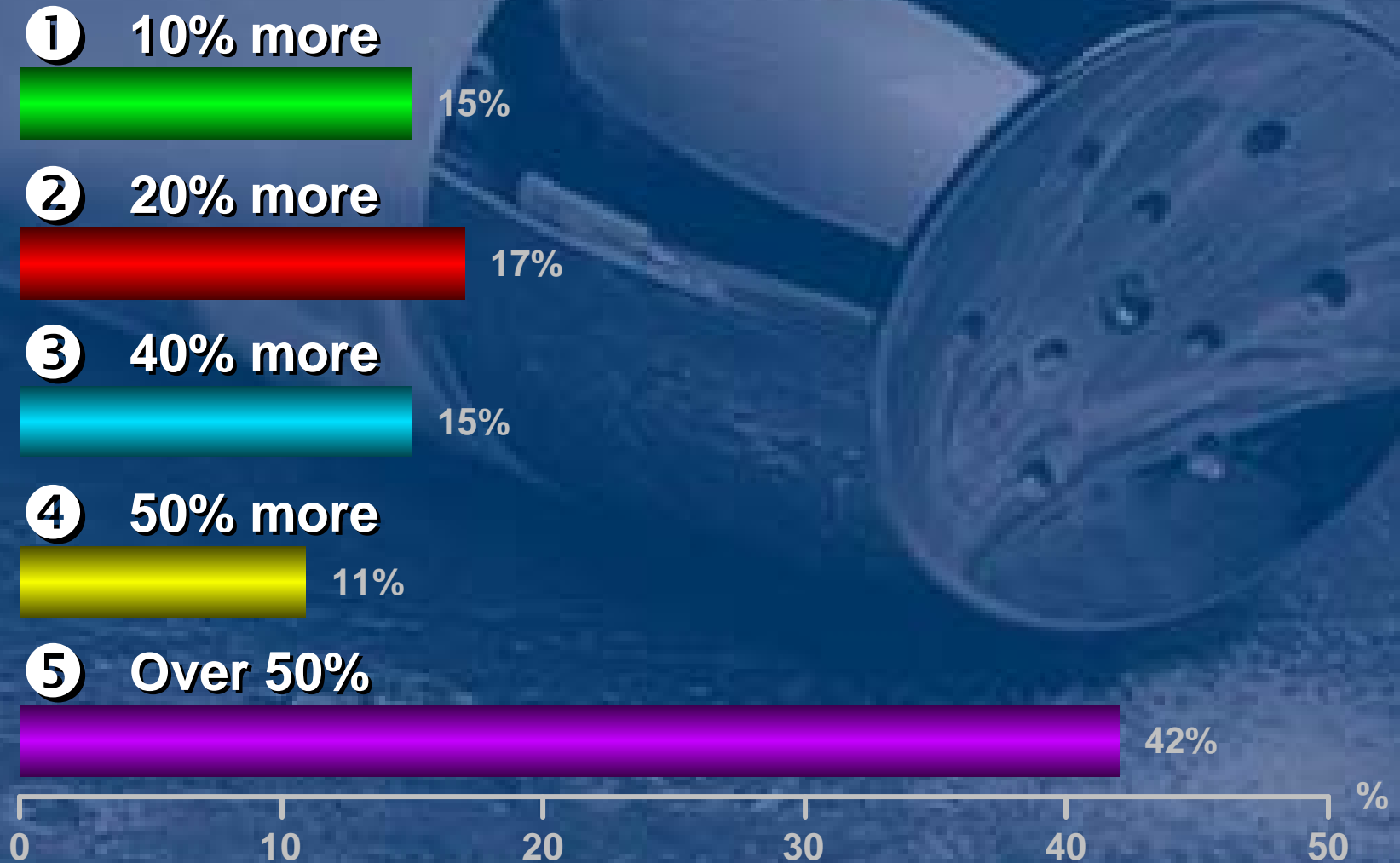
Where should the salt go?



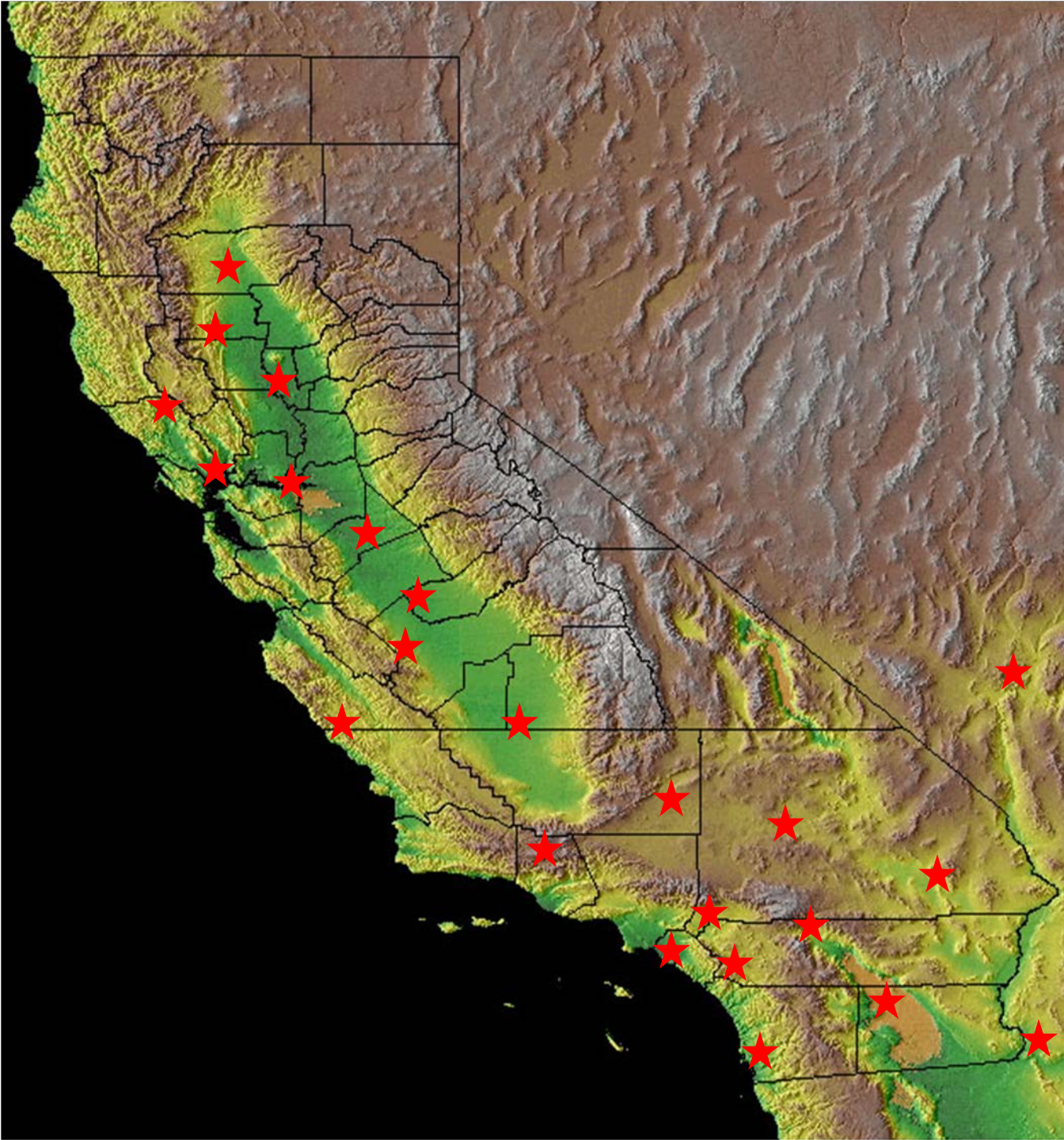
Financial impacts of salinity have been estimated at



**Many of these options can be costly.
How much would you expect this to add to your water bill?**



Statewide SALT Issues



Salton Sea is a salinity problem primarily caused by

① Agricultural irrigation



② Urban water use and transfer



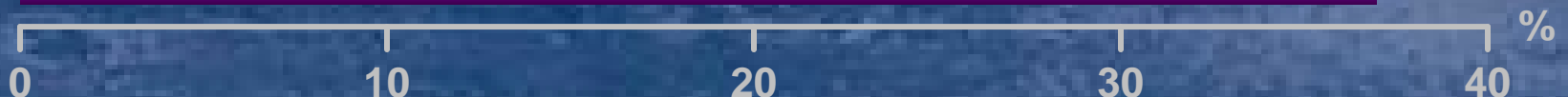
③ Irrigation water

0%

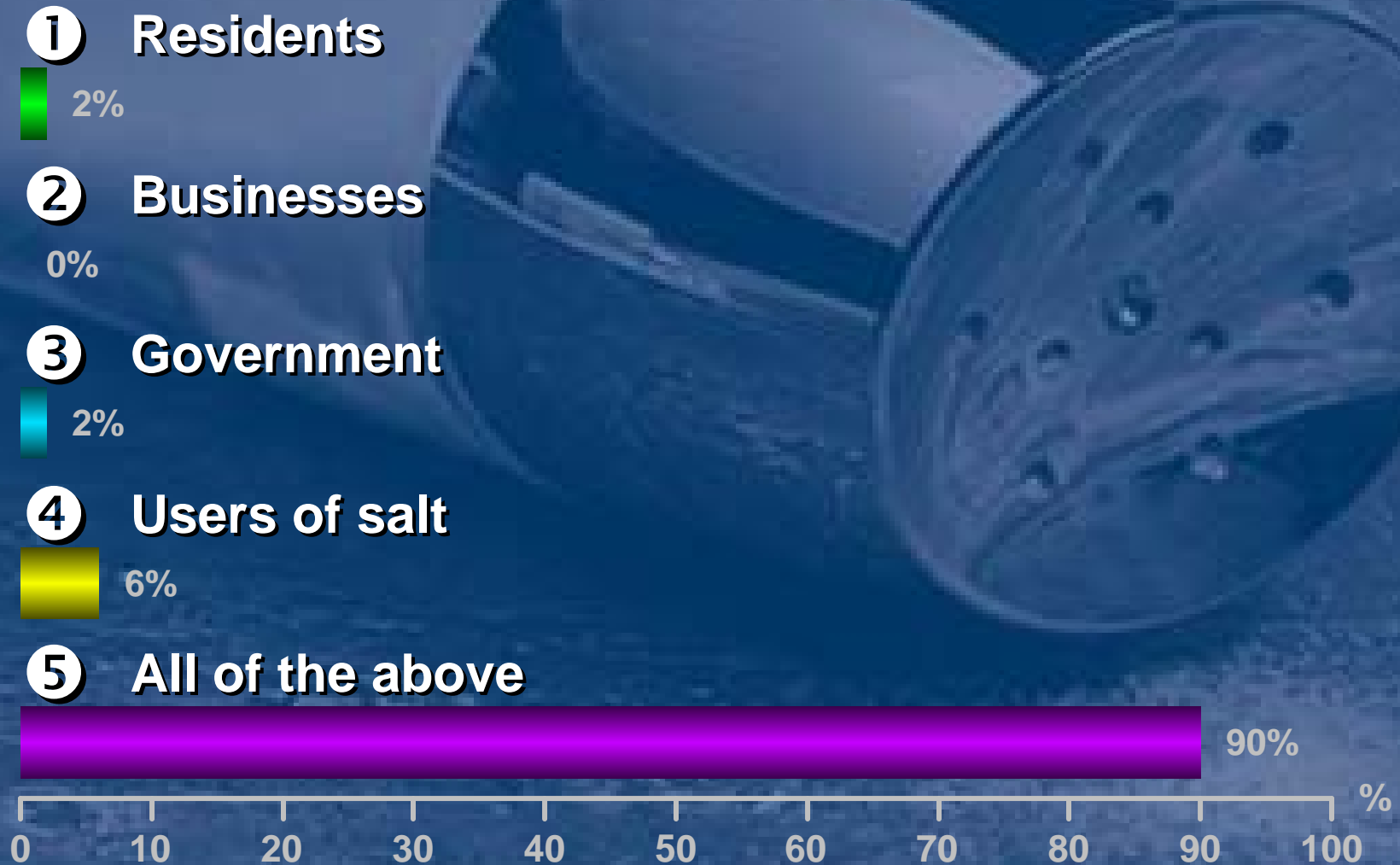
④ Water quality



⑤ A flood control error



Who do you think should pay to manage salts?



How do you think the cost of salinity management should be allocated?

① Per capita



② Based on salt used or generated



③ Weighted to growth



④ Weighted to business



⑤ Weighted to industry

